



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IX

IN THE MATTER OF:)	
)	
Omega Chemical Site)	
Whittier, California.)	
)	
Applied Air Engineering Industries, Inc.;)	
Burtin Urethane Corporation;)	
Citation Precision, Inc.;)	U.S. EPA Region IX
City of Whittier;)	CERCLA
Coast-to-Coast Analytical Services, Inc.;)	Docket No. 9-2004-0004
Coral Industries, Inc.;)	
Del Mar Avionics;)	Proceeding Under Section 106(a) of the
Eaton Corporation;)	Comprehensive Environmental Response,
Foamex L.P.;)	Compensation, and Liability Act, as
Gaiser Tool Co.;)	amended, 42 U.S.C. §9606(a)
National Broadcasting Company, Inc.;)	
NCR Corporation;)	
PolyOne Corporation;)	
Quality Fabrication, Inc.;)	
Reed & Graham, Inc.;)	
Sierracin Corporation;)	
Specific Plating Company, Inc.;)	
Transamerican Plastics Corporation;)	
W & B Marketing (ICD), Inc.;)	
Yellow Transportation, Inc.;)	
)	
Respondents)	

UNILATERAL ADMINISTRATIVE ORDER FOR RESPONSE ACTIONS

I. INTRODUCTION AND JURISDICTION

1. This Unilateral Administrative Order ("Order") directs Respondents to perform Work described in Section X of this Order and the attached Statement of Work for the Omega Chemical Corporation Site, Whittier, Los Angeles, California (the "Omega Site" or the "Site"). This Order is issued pursuant to the authority vested in the President of the United States by Section 106(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. § 9606(a), as amended by the Superfund Amendments and Reauthorization Act of 1986, and the Small Business Liability Relief and Brownfields Revitalization Act of 2002 ("CERCLA"). The President delegated this authority to the Administrator of the United States Environmental Protection Agency ("EPA" or "Agency") by Executive Order 12580, January 23, 1987, 52 Fed. Reg. 2923, and further delegated it to the Assistant Administrator for Solid Waste and Emergency Response and the Regional Administrators by EPA Delegation Nos. 14-14-A and 14-14-B. This authority has been duly redelegated to the Branch Chief, Superfund Division, EPA Region 9 ("Branch Chief"), by a delegation dated November 16, 2001.

II. PURPOSE

2. In issuing this Order, the objective of EPA is the performance of Site characterization work to determine the nature and extent of contamination and to identify the threat to the public health, welfare, or the environment caused by the release or threatened release of hazardous substances, pollutants or contaminants at or from the Site into the groundwater underlying and downgradient from the Omega Property.

3. The activities conducted under this Order are subject to approval by EPA and Respondents shall provide all appropriate necessary information to be used by EPA in the performance of a Remedial Investigation and Feasibility Study ("RI/FS"), and in a record of decision that is consistent with CERCLA and the National Contingency Plan, ("NCP"), 40 C.F.R. Part 300. The activities under this Order shall be conducted in compliance with applicable EPA guidances, policies, and procedures.

III. FINDINGS OF FACT

4. The Omega Chemical Corporation facility is located at 12504 and 12512 East Whittier Boulevard, Whittier, California, Los Angeles County, California.

a. From approximately 1976 to 1991, the Omega Chemical Corporation and Omega Refrigerant Reclamation Company operated the facility as a used solvent and refrigerant recycling, reformulation, and treatment facility. This operation primarily handled chlorinated solvents such as degreasing and dry-cleaning chemicals and refrigerants.

b. On August 27, 1993, EPA conducted a Site Assessment at the request of the California EPA, Department of Toxic Substances Control ("DTSC"). During this assessment, EPA observed over 2,900 fifty-five gallon drums of unprocessed hazardous wastes. At that time, DTSC remained the lead regulatory agency conducting negotiations with the Site owner and operator, Omega Chemical Corporation ("OCC"), to remove or otherwise address these wastes.

c. In January 1995, EPA conducted a second Site Assessment at the request of DTSC and observed approximately 3,000 drums in various stages of deterioration, many of which were corroded and leaking. Leaking substances were migrating to other portions of the Site and off Site. These substances presented a threat to human health and environment through the contamination of soil and groundwater. And, should the halogenated solvents have ignited, these substances would have presented a release of poisonous gases into the air.

d. On May 3, 1995, a time critical Removal Action Memorandum was signed authorizing a removal action involving the following response actions: a) securing the Site; b) sampling and categorizing hazardous materials; c) removing hazardous substances and grossly contaminated equipment, structures, and debris; d) sampling surface and subsurface soils and groundwater to determine the nature and extent of contamination; e) disposing, stabilizing or treating grossly contaminated soils; and f) grading, capping, and fencing areas where contamination remained in the soil.

e. On May 9, 1995, EPA issued Unilateral Administrative Order 95-15 ("the 1995 UAO") to Potentially Responsible Parties ("PRPs") to perform work described by the Action Memorandum. These parties each arranged for the disposal of hazardous substances at the Site in an amount equal to or greater than ten tons. The 1995 UAO was amended on August 31, 1995, when EPA issued it to additional PRPs. A total of 147 parties, including the Respondents to this

Order, were required to perform work under the 1995 UAO. These parties established a group identified as the Omega PRP Organized Group ("OPOG").

f. In September 1998, EPA proposed the Site for listing on the National Priorities List ("NPL"). On January 19, 1999, pursuant to section 105 of CERCLA, 42 U.S.C. § 9605, EPA placed the Omega Site on the National Priorities List, as set forth at 40 C.F.R. Part 300, Appendix B. (See, 64 Fed. Reg. 2950.)

g. On April 1, 1999, the EPA issued Special Notice Letters to OPOG members and commenced negotiations of a Partial Consent Decree requiring response work including a non-time critical removal action and a RI/FS addressing soils located at or near the Site facility. On February 23, 2000, the Partial Consent Decree, Docket No. 00-12741-TJH, was entered by the United States District Court for the Central District of California.

h. During the final days of negotiations the terms of the Partial Consent Decree, seventeen parties identified as the Respondents to this Order left the established work group, OPOG. These Respondents did not sign the Partial Consent Decree with the United States. These Respondents have not performed any work nor have they paid any EPA costs associated with work under the Partial Consent Decree or any other work performed since the Removal Action described in the May 1995 Action Memo.

i. Three parties identified as Respondents to the 1995 UAO and to this Order have not performed any work nor have they incurred any costs associated with the Site. These three parties were initially notified of their liability in 1995.

j. On June 6, 2002, EPA issued a special notice letter to the Respondents initiating negotiations for a settlement agreement to resolve liability the Respondents may have for past costs and costs incurred for work associated with the Partial Consent Decree. These negotiations were unsuccessful and EPA discontinued discussions on September 11, 2002. EPA considers Respondents uncooperative parties.

5. The Respondents to this Order are the following: Applied Air Engineering Industries, Inc.; Burtin Urethane Corporation; Citation Precision, Inc.; City of Whittier; Coast-to-Coast Analytical Services, Inc.; Coral Industries, Inc.; Del Mar Avionics; Eaton Corporation; Foamex L.P.; Gaiser Tool Co.; National Broadcasting Company, Inc.; NCR Corporation; PolyOne Corporation;

Quality Fabrication, Inc.; Reed & Graham, Inc.; Sierracin Corporation; Specific Plating Company, Inc.; Transamerican Plastics Corporation; W & B Marketing (ICD), Inc.; and Yellow Transportation, Inc. These parties shall be collectively referred to as "Respondents." Each Respondent arranged, by contract or agreement, for the disposal and/or treatment at the Site of at least ten (10) tons of hazardous substances. DTSC maintains copies of manifests reflecting the quantities and types of wastes sent by each Respondent to the Site. These wastes include, but are not limited to: Freon 113; Freon 11; Tetrachloroethene ("PCE"); Trichloroethene ("TCE"); Methylene Chloride, Acetone; various volatile organic compounds; waste oils contaminated with hazardous substances; paint thinners; solid and liquid paint wastes; and other solvent wastes. These wastes were found at the Site.

6. To expedite Site characterization and response activities, EPA divided the Site into operable units. The operable units for the Site include Operable Unit One which addresses work to be performed within the Phase 1a Area and Operable Unit Two which addresses work to be performed downgradient from Phase 1a Area. The Phase 1a Area is the area of soil and groundwater contamination associated with the Omega Property and extending downgradient approximately 100 feet southwest of Putnam Street, Whittier, California. Operable Unit Two addresses all other areas where contamination associated with the Omega facility has come to be located, specifically the groundwater plume which extends downgradient of the Phase 1a Area. This Order addresses Operable Unit Two.

7. Since February 2002, EPA has installed and sampled groundwater monitoring wells downgradient of the Phase 1a Area as part of the Operable Unit Two investigation. EPA has gathered data during quarterly groundwater sampling which identifies a downgradient groundwater plume existing as a result of releases of hazardous substances at the Site. After one year of sampling, EPA established that a groundwater plume underneath and downgradient from the Site facility contains the hazardous substances found at the Site facility including, but not limited to, Freon 113, Freon 11, PCE, and TCE. Additional monitoring and sampling is necessary to fully characterize the groundwater plume. This sampling and data will be incorporated into a RI/FS for the Site, pursuant to CERCLA and the NCP, 40 C.F.R. Part 300.

8. Hazardous substances at the Site include, but are not limited to: PCE; TCE; Freon 11; Freon 113; 1,1-Dichloroethene; Cis-1,2-Dichloroethene; Trans-1,2-Dichloroethene; 1,1-Dichloroethane; 1,2-Dichloroethane; 1,1,1-Trichloroethane; 1,1,2,2-Tetrachloroethane; Carbon Tetrachloride; Methylene Chloride; Vinyl Chloride; Benzene; MTBE; Aluminum; Chromium; Selenium; Perchlorate; Chloroform; Acetone; Chlordane; Lindane; BHC (alpha, beta gamma combined); and Heptachlor Epoxide. (See, 40 C.F.R. § 302.4.) Hazardous substances found at the Site are co-mingled.

9. Groundwater sampling data taken on the Omega Property indicate contamination levels as high as: 86,000 ug/l PCE; 5500 ug/l TCE; 6300 ug/l Freon 113; and 2900 ug/l Freon 11. The highest concentrations within the groundwater downgradient from the Phase 1a Area and within Operable Unit Two were found approximately 200 feet southwest of the site at concentrations as high as 33,000 ug/l PCE; 6,300 ug/l TCE; 7,500 ug/l Freon 113; 4300 ug/l Freon 11; 110,000 ug/l methylene chloride; 22,000 ug/l chloroform; and 26,000 ug/l acetone.

10. The Santa Fe Springs Well No. 1 (2S/11W-30R3) is located 7,000 feet or 1.33 miles southwest and downgradient from the Omega facility. This well supplies the drinking water for approximately 11,250 local residents. The well lies above the edge of the groundwater plume. Samples of water from this well indicate low levels of hazardous substances associated with the Omega Site are present in the water. The contamination within the plume poses an imminent and substantial risk to this drinking water source and to the health of 11,250 people who consume this water on a daily basis.

11. The Site is located in a community of approximately 70,000 people, across the street from a residential neighborhood and within one mile of several schools, including three elementary schools and two high schools. A skating ring entertaining approximately 500 children each week is located immediately adjacent to the facility.

IV. CONCLUSIONS OF LAW AND DETERMINATIONS

12. The Omega Chemical Corporation Site is a "facility" as defined in section 101(9) of CERCLA, 42 U.S.C. § 9601(9).
13. Respondents are "person[s]" as defined in section 101(21) of CERCLA, 42 U.S.C. § 9601(21).
14. Each Respondent is a "liable party" as defined in section 107(a) of CERCLA, 42 U.S.C. § 9607(a), and is subject to this Order under section 106(a) of CERCLA, 42 U.S.C. § 9606(a).
15. The substances listed in paragraph 8 and found at the Site are "hazardous substances" as defined in section 101(14) of CERCLA, 42 U.S.C. § 9601(14).
16. These hazardous substances have been and are being released from the Site into the soil and groundwater.
17. The past disposal and on-going migration of hazardous substances from the Site are "release[s]" as defined in section 101(22) of CERCLA, 42 U.S.C. § 9601(22).
18. The on-going migration of hazardous substances from the Site poses a threat of a "release" as defined in section 101(22) of CERCLA, 42 U.S.C. § 9601(22).
19. The release and threat of release of one or more hazardous substances from the facility presents an imminent and substantial endangerment to the public health or welfare or the environment.
20. The contamination and endangerment at this Site constitute an indivisible injury. The actions required by this Order are necessary to protect the public health, welfare, and the environment.

V. NOTICE TO THE STATE

21. On November 18, 2003, EPA notified DTSC that EPA would be issuing this Order.

VI. ORDER

22. Based on the foregoing, Respondents are hereby ordered, jointly and severally, to comply with the following provisions, including but not limited to all attachments to this Order, all documents incorporated by reference into this Order, and all schedules and deadlines in this Order, attached to this Order, or incorporated by reference into this Order.

VII. DEFINITIONS

23. Unless otherwise expressly provided herein, terms used in this Order which are defined in CERCLA or in regulations promulgated under CERCLA shall have the meaning assigned to them in the statute or its implementing regulations. Whenever terms listed below are used in this Order or in the documents attached to this Order or incorporated by reference into this Order, the following definitions shall apply:

- a. "CERCLA" shall mean the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. §§ 9601 et seq.
- b. "Day" shall mean a calendar day unless expressly stated to be a working day.
- c. "Working day" shall mean a day other than a Saturday, Sunday, or Federal holiday. In computing any period of time under this Order, where the last day would fall on a Saturday, Sunday, or Federal holiday, the period shall run until the end of the next working day.
- d. "EPA" shall mean the United States Environmental Protection Agency.
- e. "Feasibility Study" shall mean a study undertaken to develop and evaluate options for remedial action.
- f. "DTSC" shall mean the State of California Department of Toxic Substances Control.
- g. "National Contingency Plan" or "NCP" shall mean the National Contingency Plan promulgated pursuant to section 105 of CERCLA, 42 U.S.C. § 9605, codified at 40 C.F.R. Part 300, including any amendments thereto.

h. "Omega Property" shall mean the portion of the Omega Chemical Corporation Site located at 12504 and 12512 East Whittier Boulevard, Whittier, California and comprising approximately 40,000 square feet.

i. "Paragraph" shall mean a portion of this Order identified by an arabic numeral.

j. "Phase 1a Area" shall mean the area of soil and groundwater contamination associated with the Omega Property and extending downgradient approximately 100 feet southwest of Putnam Street, Whittier, California. The Phase 1a Area is currently being addressed under the Partial Consent Decree entered February 23, 2000.

k. "Remedial Investigation" shall mean a process to determine the nature and extent of the problem presented by the release of hazardous substances. The Remedial Investigation emphasizes data collection and site characterization. It includes sampling and monitoring, as necessary, and the gathering of sufficient information to determine the necessity for remedial action and to support the evaluation of remedial alternatives.

l. "Response Costs" shall mean all costs, including direct costs, indirect costs, and accrued interest incurred by the United States to perform or support response actions at the Site. Response costs include but are not limited to the costs of overseeing the Work, such as the costs of reviewing or developing plans, reports and other items pursuant to this Order and costs associated with verifying the Work.

m. "Statement of Work" or "SOW" shall mean the statement of work for implementation as set forth in Attachment 1 to this Order. The SOW is incorporated into this Order and is an enforceable part of this Order.

n. "Section" shall mean a portion of this Order identified by a roman numeral and includes one or more paragraphs.

o. "Site" shall mean the Omega Chemical Corporation Superfund Site including the Omega Property located at 12504 and 12512 East Whittier Boulevard, Whittier, California, Los Angeles County, California, the Phase 1a Area, and the area extending southwest overlying and including a downgradient groundwater plume where hazardous substances associated with the Omega Chemical Corporation Site have come to be located.

p. "State" shall mean the State of California.

q. "United States" shall mean the United States of America.

r. "Work" shall mean all activities Respondents are required to perform under the attached SOW and any activities required to be undertaken pursuant to this Order.

VIII. NOTICE OF INTENT TO COMPLY

24. Respondents shall provide, not later than ten (10) days after the effective date of this Order, written notice to EPA's Remedial Project Manager ("RPM") stating whether they will comply with the terms of this Order. If Respondents do not unequivocally commit to perform the Work as required by this Order, they shall be deemed to have violated this Order and to have failed or refused to comply with this Order. Respondents' written notice shall describe, using facts that exist on or prior to the effective date of this Order, any "sufficient cause" defenses asserted by Respondents under sections 106(b) and 107(c)(3) of CERCLA. The absence of a response by EPA to the notice required by this paragraph shall not be deemed to be acceptance of Respondents' assertions.

IX. PARTIES BOUND

25. This Order shall apply to and be binding upon each Respondent identified in paragraph 5, their directors, officers, employees, agents, successors, and assigns. Respondents are jointly and severally responsible for carrying out all activities required by this Order. No change in the ownership, corporate status, or other control of any Respondents shall alter any of the Respondents' responsibilities under this Order.

26. Respondents shall provide a copy of this Order to any prospective owners or successors before a controlling interest in Respondents' assets, property rights, or stock are transferred to the prospective owner or successor. Respondents shall provide a copy of this Order to each contractor, sub-contractor, laboratory, or consultant retained to perform any Work under this Order, within five days after the effective date of this Order or on the date such services are retained, whichever date occurs later. Respondents shall also provide a copy of this Order to each person representing any Respondents with respect to the Site or the Work and shall condition all contracts and subcontracts entered into hereunder upon performance of the Work in conformity with the terms of this Order. With regard to the activities undertaken pursuant to this Order, each

contractor and subcontractor shall be deemed to be related by contract to the Respondents within the meaning of section 107(b)(3) of CERCLA, 42 U.S.C. § 9607(b)(3). Notwithstanding the terms of any contract, Respondents are responsible for compliance with this Order and for ensuring that their contractors, subcontractors and agents comply with this Order, and perform any Work in accordance with this Order.

X. WORK TO BE PERFORMED

27. Respondents shall conduct activities and submit deliverables in accordance with the attached SOW, which is incorporated by reference. All such Work shall be conducted in accordance with CERCLA, the NCP, and any applicable EPA guidance including, but not limited to, the "Interim Final Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA" (OSWER Directive # 9355.3-01), and guidances referenced in the SOW, as may be amended or modified by EPA.

28. The general activities that Respondents are required to perform are identified below, followed by a list of deliverables. The tasks that Respondents must perform are described more fully in the SOW and guidances. The activities and the deliverables identified below shall be developed as provisions in the Work Plan and Sampling and Analysis Plan, and shall be submitted to EPA as provided herein and in the SOW. All Work performed under this Order shall be in accordance with the schedules herein, and in full accordance with the standards, specifications, and other requirements of the Work Plan, the sampling and analysis plan, and the aquifer test plan as initially approved or modified by EPA, and as may be amended or modified by EPA from time to time. For the purposes of this Order, day means calendar day unless otherwise noted in the Order.

a. Task 1: Contractor Selection. All Work performed under this Order shall be under the direction and supervision of qualified personnel. Within 30 days of the effective date of this Order, and before the Work outlined below begins, the Respondents shall notify EPA in writing of the names, titles, and qualifications of the personnel, including contractors, subcontractors, consultants and laboratories to be used in carrying out such Work. With respect to any proposed contractor, the Respondents shall demonstrate that the proposed contractor has a quality system

which complies with ANSI/ASQC E4-1994, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs," (American National Standard, January 5, 1995), by submitting a copy of the proposed in accordance with "EPA Requirements for Quality Management Plans (QA/R-2)," (EPA/240/B-01/002, March 2001) or equivalent documentation as determined by EPA. The qualifications of the persons undertaking the Work for Respondents shall be subject to EPA's review, for verification that such persons meet minimum technical background and experience requirements. This Order is contingent on Respondents' demonstration to EPA's satisfaction that Respondents are qualified to perform properly and promptly the actions set forth in this Order. If EPA disapproves in writing of any person(s)' technical qualifications, Respondents shall notify EPA of the identity and qualifications of the replacement(s) within 20 days of the written notice. If EPA subsequently disapproves of the replacement(s), EPA reserves the right to terminate this Order and to conduct the Work required, and to seek reimbursement for costs and penalties from Respondents. During the course of performing the Work, Respondents shall notify EPA in writing of any changes or additions in the personnel used to carry out such Work, providing their names, titles, and qualifications. EPA shall have the same right to approve changes and additions to personnel as it has regarding the initial notification.

b. Task 2: Project Planning. EPA determines the site-specific objectives of the required Work and devises a general management approach for the site, as stated in the attached SOW. Respondents shall conduct the remainder of planning activities as described in the attached SOW and referenced guidances. Respondents shall provide EPA with the following deliverables:

1. Work Plan. Within 45 days after EPA approval of a contractor, Respondents shall submit to EPA a complete Work Plan. If EPA disapproves of or requires revisions to the Work Plan, in whole or in part, Respondents shall amend and submit to EPA a revised Work Plan which is responsive to the directions in all EPA comments, within 30 days of receiving EPA's comments.

2. Sampling and Analysis Plan. Within 45 days after EPA approval of the Work Plan, Respondents shall submit to EPA the sampling and analysis plan (SAP). This plan shall consist of a field sampling plan (FSP) and a quality assurance project plan (QAPP), as described in the SOW and EPA guidances. If EPA disapproves of or requires

revisions to the SAP, in whole or in part, Respondents shall amend and submit to EPA a revised SAP which is responsive to the directions in all EPA comments, within 30 days of receiving EPA's comments.

3. Site Health and Safety Plan. Within 45 days after EPA approval of the Work Plan, Respondents shall submit to EPA the Site Health and Safety Plan.

4. Community Relations Plan. EPA will prepare a community relations plan, in accordance with EPA guidance and the NCP. Respondents shall upon request provide information supporting EPA's community relations program.

c. Task 3: Groundwater Monitoring Well Installation. Following EPA approval or modification of the Work Plan and SAP, Respondents shall implement these plans to gather data necessary to characterize the Site. Respondents shall complete groundwater well installation and sampling as required under Task 3 of this Order and the SOW within 90 days after EPA approval of the SAP. Respondents shall provide EPA analytical data within a sampling report in an electronic format (i.e., computer disk) showing the location, medium and results within 30 days after receipt of the data from each sampling activity. Field reports shall be submitted by Respondents as required under the SOW.

d. Task 4: Aquifer Testing. Following EPA approval or modification of the Work Plan and SAP, Respondents shall implement these plans to gather data necessary to characterize the site. Respondents shall conduct aquifer pump testing as required under Task 4 of this Order and the attached SOW. Respondents shall prepare an Aquifer Testing Plan (ATP) as required within the SOW. The ATP shall be submitted to EPA for approval within 120 days after EPA approval of the Work Plan. The ATP must be approved by EPA before aquifer testing begins at the Site. Respondent shall conduct aquifer pump tests within 30 days after EPA approval of the ATP. The results of the aquifer testing, including all data and a description of field activities, shall be submitted to EPA within 30 days of completion of field work. Field reports shall be submitted by Respondents as required under the SOW.

e. Task 5: Quarterly Monitoring. Following EPA approval or modification of the Work Plan and SAP, Respondents shall conduct sampling events at the Site as required under Task 5 of this Order and the attached SOW. Respondents shall sample on a quarterly basis all wells existing at the Site which were installed by Respondents under Task 3 and all wells installed by EPA.

Respondents shall also sample on a semiannual basis all wells existing at the Site which were installed by OPOG. Sampling reports, including a description of field activities and all data, shall be submitted to EPA within 30 days after the sampling event. Field reports shall be submitted by Respondents as required under the SOW.

f. Task 6: Project Completion Report. Within 30 days of completing aquifer testing field activities, Respondents shall submit an outline of the Project Completion Report for EPA review and approval as required under the SOW. Within 45 days after EPA approval of the Project Completion Report outline, Respondents shall submit for EPA review and approval the Project Completion Report as required under the SOW.

29. EPA reserves the right to comment on, modify and direct changes for all deliverables. At EPA's discretion, Respondents must fully correct all deficiencies and incorporate and integrate all information and comments supplied by EPA either in subsequent or resubmitted deliverables.

30. Respondents shall not proceed further with any subsequent activities or tasks until receiving EPA approval for the following deliverables: the Work Plan, the SAP, the ATP, Project Completion Report outline, and the Project Completion Report. While awaiting EPA approval on these deliverables, Respondents shall proceed with all other tasks and activities which may be conducted independently of these deliverables, in accordance with the schedule set forth in this Order and the SOW.

31. For all remaining deliverables not enumerated above in paragraph 30, including but not limited to weekly or daily field reports or sampling reports as required under the SOW, Respondents shall proceed with all subsequent tasks, activities and deliverables without awaiting EPA approval on the submitted deliverable. EPA reserves the right to stop Respondents from proceeding further, either temporarily or permanently, on any tasks, activity or deliverable at any point.

32. In the event that Respondents amend or revise a report, plan or other submittal upon receipt of EPA comments, if EPA subsequently disapproves of the revised submittal, or if subsequent submittals do not fully reflect EPA's directions for changes, EPA retains the right to: seek statutory penalties; perform its own studies; complete the Work, or any portion of the Work, required under this Section or the attached SOW; seek reimbursement from the Respondents for its costs; and/or seek any other appropriate relief as authorized under CERCLA and the NCP.

33. In the event that EPA takes over some of the tasks, Respondents shall complete all remaining tasks in accordance with the schedule within this Order and the attached SOW.

34. Neither failure of EPA to expressly approve or disapprove of Respondents' submissions within a specified time period(s), nor the absence of comments, shall be construed as approval by EPA. Whether or not EPA gives express approval for Respondents' deliverables, Respondents are responsible for preparing deliverables acceptable to EPA.

35. Respondents shall, prior to any off-site shipment of hazardous substances from the site to an out-of-state waste management facility, provide written notification to the appropriate state environmental official in the receiving state and to EPA's Designated Project Coordinator of such shipment of hazardous substances.

a. The notification shall be in writing, and shall include the following information, where available: (1) the name and location of the facility to which the hazardous substances are to be shipped; (2) the type and quantity of the hazardous substances to be shipped; (3) the expected schedule for the shipment of the hazardous substances; and (4) the method of transportation. Respondents shall notify the receiving state of major changes in the shipment plan, such as decision to ship the hazardous substances to another facility within the same state, or to a facility in another state.

b. The identity of the receiving facility and state will be determined by Respondents following the award of the contract for the required Work. Respondents shall provide all relevant information, including information under the categories noted in paragraph 35(a) above, on the off-site shipments, as soon as practical after the award of the contract and before the hazardous

substances are actually shipped.

XI. BASELINE RISK ASSESSMENT

36. EPA will perform the baseline risk assessment using data collected by Respondents as required by this Order.

XII. ADDITIONAL RESPONSE ACTIONS

37. EPA may determine that in addition to the Work identified in this Order and attachments to this Order, additional response activities may be necessary to protect human health and the environment. If EPA determines that additional response activities are necessary, EPA may require Respondents to submit a work plan for additional response activities. EPA may also require Respondents to modify any plan, design, or other deliverable required by this Order, including any approved modifications.

38. Not later than thirty (30) days after receiving EPA's notice that additional response activities are required pursuant to this Section, Respondents shall submit a work plan for the response activities to EPA for review and approval. Upon approval by EPA, the work plan is incorporated into this Order as a requirement of this Order and shall be an enforceable part of this Order. Upon approval of the work plan by EPA, Respondents shall implement the work plan according to the standards, specifications, and schedule in the approved work plan. Respondents shall notify EPA of their intent to perform such additional response activities within seven (7) days after receipt of EPA's request for additional response activities.

XIII. ENDANGERMENT AND EMERGENCY RESPONSE

39. In the event of any action or occurrence during the performance of the Work which causes or threatens to cause a release of a hazardous substance or which may present an immediate threat to public health or welfare or the environment, Respondents shall immediately take all appropriate action to prevent, abate, or minimize the threat, and shall immediately notify EPA's Remedial Project Manager (RPM) or, if the RPM is unavailable, EPA's Alternate RPM. If neither of these persons is available, Respondents shall notify the EPA Emergency Response Section, Region 9 at

(800) 300-2193 or the National Response Center at (800) 424-8802. Respondents shall take such action in consultation with EPA's RPM and in accordance with all applicable provisions of this Order, including but not limited to the Health and Safety Plan and the NCP. In the event that Respondents fail to take appropriate response action as required by this Section, and EPA takes that action instead, Respondents shall reimburse EPA for all costs of the response action not inconsistent with the NCP. Respondents shall pay the response costs in the manner described in Section XXIV of this Order, within thirty (30) days of Respondents' receipt of demand for payment and a summary of the costs incurred.

40. Nothing in the preceding paragraph shall be deemed to limit any authority of the United States to take, direct, or order all appropriate action to protect human health and the environment or to prevent, abate, or minimize an actual or threatened release of hazardous substances on, at, or from the Site.

XIV. EPA REVIEW OF SUBMISSIONS

41. After review of any deliverable, plan, report or other item which is required to be submitted for review and approval pursuant to this Order, EPA may: (a) approve the submission; (b) approve the submission with modifications; (c) disapprove the submission and direct Respondents to re-submit the document after incorporating EPA's comments; or (d) disapprove the submission and assume responsibility for performing all or any part of the response action. As used in this Order, the terms "approval by EPA," "EPA approval," or a similar term means the action described in paragraphs (a) or (b) of this paragraph.

42. In the event of approval or approval with modifications by EPA, Respondents shall proceed to take any action required by the plan, report, or other item, as approved or modified by EPA.

43. Upon receipt of a notice of disapproval or a request for a modification, Respondents shall, within thirty (30) days or such other time as specified by EPA in its notice of disapproval or request for modification, correct the deficiencies and resubmit the plan, report, or other item for

approval. Notwithstanding the notice of disapproval, or approval with modifications, Respondents shall proceed, at the direction of EPA, to take any action required by any non-deficient portion of the submission.

44. If any submission is not approved by EPA, Respondents shall be deemed to be in violation of this Order.

XV. PROGRESS REPORTS

45. In addition to the other deliverables set forth in this Order, Respondents shall provide quarterly progress reports to EPA with respect to actions and activities undertaken pursuant to this Order. The progress reports shall be submitted on or before the 15th of March, June, September, and December of each year following the effective date and for the duration of this Order. Respondents' obligation to submit progress reports continues until EPA gives Respondents written notice under this paragraph. At a minimum these progress reports shall: (1) describe the actions which have been taken to comply with this Order during the prior month; (2) include all results of sampling and tests and all other data received by Respondents and not previously submitted to EPA; (3) describe all Work planned for the next 6 months with schedules relating such Work; and (4) describe all problems encountered and any anticipated problems, any actual or anticipated delays, and solutions developed and implemented to address any actual or anticipated problems or delays.

XVI. QUALITY ASSURANCE, SAMPLING AND DATA ANALYSIS

46. Respondents shall assure that Work performed, samples taken and analyses conducted conform to the requirements of the SOW, the QAPP and guidelines identified therein. Respondents will assure that field personnel used by Respondents are properly trained in the use of field equipment and in the chain of custody procedures. Respondents shall only use laboratories which have a documented quality system that complies with ANSI/ASQC E4-1994, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Program," (American National Standard, January 5, 1995) and "EPA Requirements for Quality Management Plans (QA/R-2)," (EPA/240/B-01/002, March 2001).

47. Respondents shall notify EPA not less than fourteen (14) days in advance of any sample collection activity. At the request of EPA, Respondents shall allow split or duplicate samples to be taken by EPA or its authorized representatives, of any samples collected by Respondents with regard to the Site or pursuant to the implementation of this Order. In addition, EPA shall have the right to take any additional samples that EPA deems necessary.

XVII. COMPLIANCE WITH APPLICABLE LAWS

48. All activities by Respondents pursuant to this Order shall be performed in accordance with the requirements of all Federal and state laws and regulations. EPA has determined that the activities contemplated by this Order are consistent with the NCP.

49. Except as provided in section 121(e) of CERCLA and the NCP, no permit shall be required for any portion of the Work conducted entirely on-Site. Where any portion of the Work requires a Federal or state permit or approval, Respondents shall submit timely applications and take all other actions necessary to obtain and to comply with all such permits or approvals.

50. This Order is not, and shall not be construed to be, a permit issued pursuant to any Federal or state statute or regulation.

51. All materials removed from the Site shall be disposed of or treated at a facility approved by EPA's RPM and in accordance with section 121(d)(3) of CERCLA, 42 U.S.C. § 9621(d)(3); with the U.S. EPA "Revised Off-Site Policy," OSWER Directive 9834.11, November 13, 1987; and with all other applicable Federal, state, and local requirements.

XVIII. REMEDIAL PROJECT MANAGER

52. All communications, whether written or oral, from Respondents to EPA shall be directed to EPA's Remedial Project Manager or Alternate Remedial Project Manager. Respondents shall submit to EPA three copies of all documents, including plans, reports, and other correspondence, which are developed pursuant to this Order, and shall send these documents by overnight mail. Whenever possible, Respondents shall send a copy of any document electronically.

EPA's Remedial Project Manager is:

Christopher Lichens
US Environmental Protection Agency Region 9
Mail Code SFD-7-4
75 Hawthorne Street
San Francisco, California 94105
lichens.christopher@epa.gov
415-972-3149

EPA's Alternate Remedial Project Manager is:

Loren Henning
US Environmental Protection Agency Region 9
Mail Code SFD-7-4
75 Hawthorne Street
San Francisco, California 94105
henning.loren@epa.gov
415-972-3164

53. EPA has the unreviewable right to change its Remedial Project Manager or Alternate Remedial Project Manager. If EPA changes its Remedial Project Manager or Alternate Remedial Project Manager, EPA will inform Respondents in writing of the name, address, and telephone number of the new Remedial Project Manager or Alternate Remedial Project Manager.

54. EPA's RPM and Alternate RPM shall have the authority lawfully vested in a Remedial Project Manager (RPM) and On-Scene Coordinator (OSC) by the NCP, 40 C.F.R. Part 300. EPA's RPM or Alternate RPM shall have authority, consistent with the NCP, to halt any Work required by this Order, and to take any necessary response action.

55. Within ten (10) days after the effective date of this Order, Respondents shall designate a Project Coordinator and shall submit the name, address, and telephone number of the Project Coordinator to EPA for review and approval. Respondents' Project Coordinator shall be responsible for overseeing Respondents' implementation of this Order. If Respondents wish to change their Project Coordinator, Respondents shall provide written notice to EPA, five (5) days

prior to changing the Project Coordinator, of the name and qualifications of the new Project Coordinator. Respondents selection of a Project Coordinator shall be subject to EPA approval.

XIX. ACCESS TO SITE NOT OWNED BY RESPONDENTS

56. If the Site, the off-Site area that is to be used for access, property where documents required to be prepared or maintained by this Order are located, or other property subject to or affected by the clean up, is owned in whole or in part by parties other than those bound by this Order, Respondents will obtain, or use their best efforts to obtain, site access agreements from the present owners within 60 days of the effective date of this Order. Such agreements shall provide access for EPA, its contractors and oversight officials, the state and its contractors, and Respondents or Respondents authorized representatives and contractors, and such agreements shall specify that Respondents are not EPA's representative with respect to liability associated with Site activities. Respondents shall save and hold harmless the United States and its officials, agents, employees, contractors, subcontractors, or representatives for or from any and all claims or causes of action or other costs incurred by the United States including but not limited to attorneys' fees and other expenses of litigation and settlement arising from or on account of acts or omissions of Respondents, their officers, directors, employees, agents, contractors, subcontractors, and any persons acting on their behalf or under their control, in carrying out activities pursuant to this Order, including any claims arising from any designation of Respondents as EPA's authorized representative(s) under section 104(e) of CERCLA. Copies of such agreements shall be provided to EPA prior to Respondent's initiation of field activities. Respondent's best efforts shall include providing reasonable compensation to any off-Site property owner. If access agreements are not obtained within the time referenced above, Respondents shall immediately notify EPA of its failure to obtain access. Subject to the United States' non-reviewable discretion, EPA may use its legal authorities to obtain access for the Respondents, may perform those response actions with EPA contractors at the property in question, or may terminate the Order if Respondents cannot obtain access agreements. If EPA performs those tasks or activities with contractors and does not terminate the Order, Respondents shall perform all other activities not requiring access to that property, and shall reimburse EPA, pursuant to Section XXIV of this Order, for all costs incurred in performing such activities.

Respondents shall integrate the results of any such tasks undertaken by EPA into its reports and deliverables. Respondents shall reimburse EPA, pursuant to Section XXIV of this Order, for all response costs (including attorney fees) incurred by the United States to obtain access for Respondents.

XX. SITE ACCESS AND DATA/DOCUMENT AVAILABILITY

57. Respondents shall allow EPA and its authorized representatives and contractors to enter and freely move about all property at the Site and off-Site areas subject to or affected by the Work under this Order or where documents required to be prepared or maintained by this Order are located, for the following purposes: inspecting conditions, activities, the results of activities, records, operating logs, and contracts related to the Site or Respondents and its representatives or contractors pursuant to this Order; reviewing the progress of the Respondents in carrying out the terms of this Order; conducting tests as EPA or its authorized representatives or contractors deem necessary; using a camera, sound recording device or other documentary type equipment; and verifying the data submitted to EPA by Respondents. Respondents shall allow EPA and its authorized representatives to enter the Site, to inspect and copy all records, files, photographs, documents, sampling and monitoring data, and other writings related to Work undertaken in carrying out this Order. Nothing herein shall be interpreted as limiting or affecting EPA's right of entry or inspection authority under Federal law.

58. Respondents may assert a claim of business confidentiality covering part or all of the information submitted to EPA pursuant to the terms of this Order under 40 C.F.R. § 2.203, provided such claim is not inconsistent with section 104(e)(7) of CERCLA, 42 U.S.C. § 9604(e)(7) or other provisions of law. This claim shall be asserted in the manner described by 40 C.F.R. § 2.203(b) and substantiated by Respondents at the time the claim is made. Information determined to be confidential by EPA will be given the protection specified in 40 C.F.R. Part 2. If no such claim accompanies the information when it is submitted to EPA, it may be made available to the public by EPA or the state without further notice to the Respondents. Respondents shall not assert confidentiality claims with respect to any data related to Site conditions, sampling, or monitoring.

59. Respondents shall maintain for the period during which this Order is in effect, an index of documents that Respondents claim contain confidential business information. The index shall contain, for each document, the date, author, addressee, and subject of the document. Upon written request from EPA, Respondents shall submit a copy of the index to EPA.

XXI. RECORD PRESERVATION

60. Respondents shall provide to EPA upon request, copies of all documents and information within their possession and/or control or that of their contractors or agents relating to activities at the Site or to the implementation of this Order, including but not limited to sampling, analysis, chain of custody records, manifests, trucking logs, receipts, reports, sample traffic routing, correspondence, or other documents or information related to the Work. Respondents shall also make available to EPA for purposes of investigation, information gathering, or testimony, their employees, agents, or representatives with knowledge of relevant facts concerning the performance of the Work.

61. Until ten (10) years after the Effective Date of this Order, each Respondent shall preserve and retain all records and documents in its possession or control, including the documents in the possession or control of their contractors and agents on and after the effective date of this Order that relate in any manner to the Site. At the conclusion of this document retention period, Respondents shall notify the United States at least ninety (90) calendar days prior to the destruction of any such records or documents, and upon request by the United States, Respondents shall deliver any such records or documents to EPA.

62. Until ten (10) years after the Effective Date of this Order, Respondents shall preserve, and shall instruct their contractors and agents to preserve, all documents, records, and information of whatever kind, nature or description relating to the performance of the Work. Upon the conclusion of this document retention period, Respondents shall notify the United States at least ninety (90) days prior to the destruction of any such records, documents or information, and, upon request of the United States, Respondents shall deliver all such documents, records and information to EPA.

63. Within 30 days after the effective date of this Order, Respondents shall submit a written certification to EPA's RPM that they have not altered, mutilated, discarded, destroyed or otherwise disposed of any records, documents or other information relating to their potential liability with regard to the Site since notification of potential liability by the United States or the State. Respondents shall not dispose of any such documents without prior approval by EPA. Respondents shall, upon EPA's request and at no cost to EPA, deliver the documents or copies of the documents to EPA.

XXII. DELAY IN PERFORMANCE

64. Any delay in performance of this Order that, in EPA's judgment, is not properly justified by Respondents under the terms of this paragraph shall be considered a violation of this Order. Any delay in performance of this Order shall not affect Respondents' obligations to fully perform all obligations under the terms and conditions of this Order.

65. Respondents shall notify EPA of any delay or anticipated delay in performing any requirement of this Order. Such notification shall be made by telephone to EPA's RPM or Alternate RPM within forty-eight (48) hours after Respondents first knew or should have known that a delay might occur. Respondents shall adopt all reasonable measures to avoid or minimize any such delay. Within five (5) business days after notifying EPA by telephone, Respondents shall provide written notification fully describing the nature of the delay, any justification for delay, any reason why Respondents should not be held strictly accountable for failing to comply with any relevant requirements of this Order, the measures planned and taken to minimize the delay, and a schedule for implementing the measures that will be taken to mitigate the effect of the delay. Increased costs or expenses associated with implementation of the activities called for in this Order is not a justification for any delay in performance.

XXIII. ASSURANCE OF ABILITY TO COMPLETE WORK

66. Respondents shall demonstrate their ability to complete the Work required by this Order and to pay all claims that arise from the performance of the Work by obtaining and presenting to EPA within thirty (30) days after approval of the Work Plan, one of the following: (1) a

performance bond; (2) a letter of credit; (3) a guarantee by a third party; or (4) internal financial information to allow EPA to determine that Respondents have sufficient assets available to perform the Work. Respondents shall demonstrate financial assurance in an amount no less than two million dollars (\$2,000,000). If Respondents seek to demonstrate ability to complete the required Work by means of internal financial information, or by guarantee of a third party, they shall re-submit such information annually, on the anniversary of the effective date of this Order. If EPA determines that such financial information is inadequate, Respondents shall, within thirty (30) days after receipt of EPA's notice of determination, obtain and present to EPA for approval one of the other three forms of financial assurance listed above.

67. At least seven (7) days prior to commencing any Work at the Site pursuant to this Order, Respondents shall submit to EPA a certification that Respondents or their contractors and subcontractors have adequate insurance coverage or have indemnification for liabilities for injuries or damages to persons or property which may result from the activities to be conducted by or on behalf of Respondents pursuant to this Order. Respondents shall ensure that such insurance or indemnification is maintained for the duration of the Work required by this Order.

XXIV. REIMBURSEMENT OF RESPONSE COSTS

68. Respondents shall reimburse EPA, upon written demand, for all response costs incurred by the United States in overseeing Respondents' implementation of the requirements of this Order or in performing any response action which Respondents fail to perform in compliance with this Order. EPA may submit to Respondents on a periodic basis an accounting of all response costs incurred by the United States with respect to this Order. EPA's Agency Financial Management System summary data (SCORPIOS Report), or such other summary as created by EPA, shall serve as basis for payment demands.

69. Respondents shall, within thirty (30) days of receipt of each EPA accounting, remit a certified or cashier's check for the amount of those costs. Interest shall accrue from the later of the date that payment of a specified amount is demanded in writing or the date of the expenditure. The interest rate is the rate established by the Department of the Treasury pursuant to 31 U.S.C.

§ 3717 and 4 C.F.R. § 102.13.

70. Checks shall be made payable to the Hazardous Substances Superfund and shall include the name of the Site and the Operable Unit Two, the Site identification number, 09BC, and the title and docket number of this Order. Checks shall be forwarded to:

U.S. Environmental Protection Agency
Cincinnati Accounting Operations
Attention: Region 9 Receivables
Omega Chemical Site Special Account, OU 2
P.O. Box 371099M
Pittsburgh, PA 15251

71. Respondents shall send copies of each transmittal letter and check to the EPA's RPM.

72. In the event that the payments for response costs are not made as required above, Respondents shall pay interest on the unpaid balance. Interest is established at the rate specified in section 107(a) of CERCLA. Interest shall accrue at the rate specified through the date of the payment. Payments of interest made under this Paragraph shall be in addition to such other remedies or sanctions available to the United States by virtue of Respondents' failure to make timely payments under this section.

XXV. UNITED STATES NOT LIABLE

73. The United States, by issuance of this Order, assumes no liability for any injuries or damages to persons or property resulting from acts or omissions by Respondents, or their directors, officers, employees, agents, representatives, successors, assigns, contractors, or consultants in carrying out any action or activity pursuant to this Order. Neither EPA nor the United States may be deemed to be a party to any contract entered into by Respondents or their directors, officers, employees, agents, successors, assigns, contractors, or consultants in carrying out any action or activity pursuant to this Order.

XXVI. ENFORCEMENT AND RESERVATIONS

74. EPA reserves the right to bring an action against Respondents under section 107 of

CERCLA, 42 U.S.C. § 9607, for recovery of any response costs incurred by the United States related to this Order and not reimbursed by Respondents. This reservation shall include but not be limited to past costs, direct costs, indirect costs, the costs of oversight, the costs of compiling the cost documentation to support oversight cost demands, as well as accrued interest as provided in section 107(a) of CERCLA.

75. Notwithstanding any other provision of this Order, at any time during the response action, EPA may perform its own studies, complete the response action (or any portion of the response action) as provided in CERCLA and the NCP, and seek reimbursement from Respondents for its costs, or seek any other appropriate relief.

76. Nothing in this Order shall preclude EPA from taking any additional enforcement actions, including modification of this Order or issuance of additional Orders, and/or additional remedial or removal actions as EPA may deem necessary, or from requiring Respondents in the future to perform additional activities pursuant to CERCLA, 42 U.S.C. § 9606(a), et seq., or any other applicable law. Respondents shall be liable under CERCLA section 107(a), 42 U.S.C. § 9607(a), for the costs of any such additional actions.

77. Notwithstanding any provision of this Order, the United States hereby retains all of its information gathering, inspection and enforcement authorities and rights under CERCLA, RCRA and any other applicable statutes or regulations.

78. Respondents shall be subject to civil penalties under section 106(b) of CERCLA, 42 U.S.C. § 9606(b), of not more than \$27,500 for each day in which Respondents willfully violates, or fails or refuses to comply with this Order without sufficient cause. In addition, failure to properly provide response action under this Order, or any portion hereof, without sufficient cause, may result in liability under section 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3), for punitive damages in an amount at least equal to, and not more than, three times the amount of any costs incurred by the Fund as a result of such failure to take proper action.

79. Nothing in this Order shall constitute or be construed as a release from any claim, cause of action or demand in law or equity against any person for any liability it may have arising out of or relating in any way to the Site.

80. If a court issues an order that invalidates any provision of this Order or finds that Respondents have sufficient cause not to comply with one or more provisions of this Order, Respondents shall remain bound to comply with all provisions of this Order not invalidated by the court's order.

XXVII. ADMINISTRATIVE RECORD

81. Upon request by EPA, Respondents must submit to EPA all documents related to the selection of the response action for possible inclusion in the administrative record file.

XXVIII. EFFECTIVE DATE AND COMPUTATION OF TIME

82. This Order shall be effective 10 days after the Order is signed by the Superfund Site Cleanup Branch Chief. All times for performance of ordered activities shall be calculated from this effective date.

XXIX. OPPORTUNITY TO CONFER

83. Respondents may, within ten (10) days after the date this Order is signed, request a conference with EPA's Superfund Site Cleanup Branch Chief to discuss this Order. If requested, the conference shall occur at 75 Hawthorne Street, San Francisco, California.

84. The purpose and scope of the conference shall be limited to issues involving the implementation of the response actions required by this Order and the extent to which Respondents intend to comply with this Order. This conference is not an evidentiary hearing, and does not constitute a proceeding to challenge this Order. It does not give Respondents a right to seek review of this Order, or to seek resolution of potential liability, and no official stenographic record of the conference will be made. At any conference held pursuant to Respondent's request, Respondents may appear in person or by an attorney or other representative.

85. Requests for a conference must be by telephone followed by written confirmation mailed that day to:

Thanne Cox
Assistant Regional Counsel
US EPA Region 9
Mail Code ORC-3
75 Hawthorn Street
San Francisco, California 94105
415-972-3908
cox.elizabeth@epa.gov

So Ordered, this 5th day of January, 2004.

BY: Elizabeth J. Adams
Elizabeth J. Adams, Chief
Superfund Site Cleanup Branch
U.S. Environmental Protection Agency

ATTACHMENT 1 TO ADMINISTRATIVE ORDER 2004-
0004

**STATEMENT OF WORK
REMEDIAL INVESTIGATION FIELD
ACTIVITIES**

**OMEGA CHEMICAL SUPERFUND SITE
OPERABLE UNIT TWO**

WHITTIER, CALIFORNIA

January 2, 2004

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STATEMENT OF WORK

OMEGA CHEMICAL SUPERFUND SITE

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Attachment 1: EPA Guidance Documents

Attachment 2: Existing Groundwater Monitoring Well Locations and Construction Summary

INTRODUCTION

Respondents shall conduct defined elements of a Remedial Investigation (“the project”) in accordance with the Administrative Order for Remedial Investigation, Docket 2004-0004 (“the Order”), this Statement of Work, and relevant EPA guidance. The major tasks and deliverables required by the Order are: 1) Selecting a Contractor; 2) Project Planning; 3) Groundwater Monitoring Well Installation; 4) Aquifer Testing; 5) Quarterly Monitoring; and 6) Project Completion Report. If EPA concludes that additional work is needed after implementation of the approved Work Plan, EPA may require Respondents to submit an addendum to the approved Work Plan or a new Work Plan. All project planning documents must be approved by EPA prior to the initiation of field activities. Respondents shall furnish all necessary personnel, materials, and services needed, or incidental to, performing the RI, except as otherwise specified in the Order.

EPA will be responsible for oversight of the Respondents’ activities throughout the project. EPA contractors may assist EPA in providing field oversight.

1 PURPOSE

Respondents shall conduct RI activities at the Omega Chemical Superfund Site and develop the data necessary to support the selection of a site remedy that will eliminate, reduce, or control risks to human health and the environment. This SOW sets forth the framework and requirements for this effort.

2 GENERAL REQUIREMENTS

The respondents shall conduct RI activities in accordance with this SOW and relevant EPA guidance documents. Activity-specific guidance documents are listed in the text of this SOW and more general or multi-task guidance documents are listed in Attachment 1. In all cases the respondents shall use the most recently issued guidance.

Within 21 days of the effective date of the Order, the respondents shall designate a Project Coordinator to report directly to the RPM. The Project Coordinator is responsible for ensuring that the SOW is implemented according to the terms of the order and that all performance standards are met.

The respondents shall communicate at least weekly with the EPA Remedial Project Manager (RPM), in face-to-face meetings, through conference calls, or by email. The respondents shall document all decisions that are made in meetings and conversations with EPA and forward this documentation to the RPM within two working days of the meeting or conversation.

The respondents shall furnish all necessary personnel, equipment, materials, and services needed

for, or incidental to, performing and completing this SOW. The respondents shall maintain all technical records in accordance with this SOW. During the period the respondents are completing the SOW activities, the respondents shall submit to the RPM two hardcopy (and/or electronically if directed to do so by the RPM) of each technical memorandum, data summary, or other document produced pursuant to this SOW.

EPA will review deliverables prepared through implementation of this SOW. However, acceptance of documents by EPA does not relieve the respondents of responsibility for the technical quality and reliability of these documents.

3 REQUIRED TASKS AND SUBMITTALS

3.1 Task 1: Contractor Selection

Within 30 days of the effective date of this order, respondents shall submit to EPA the name and qualifications of an environmental contractor to perform the work required under this order. The proposed contractor must demonstrate experience with at least three projects of similar scope and magnitude within the last three years. Project summaries, including a narrative description of the activities performed, project team personnel, project start and end dates, dollar value, and client references shall be submitted to EPA. Resumes of proposed contractor personnel shall also be provided and demonstrate experience relevant to this SOW.

3.2 Task 2: Project Planning

Work Plan

Within 45 days of EPA approval of the contractor, Respondents shall submit to EPA a complete RI work plan, including a description and schedule for completing all field activities and follow-up reports. If EPA disapproves or requires revisions to the RI work plan, in whole or in part, Respondents shall amend and submit to EPA a revised work plan which is responsive to the directions in all EPA comments. Unless EPA agrees otherwise, the Work Plan should include the following elements:

- a brief description of the Site, including its location, past and current site activities, and any significant ecological, cultural or natural resource features;
- a description of the roles and responsibilities of organizations and key personnel involved in the the project, including lines of authority;
- a summary of existing information on the hydrogeology of the site area, including subsurface stratigraphy, a description of the aquifer system, and influences on and temporal variation in groundwater elevations and flow;
- a summary of existing information on groundwater quality at and in the vicinity of the Site, including the nature, extent, and movement of contaminants in the groundwater, and an assessment of the quality and usefulness of existing data;
- a description of planned groundwater investigation activities, including a preliminary estimate of the number, location, depth, and construction of

- groundwater monitoring wells;
- the rationale for proposed groundwater monitoring well locations and screen intervals, in relation to potential source areas, groundwater elevations and flow direction, and aquifer structure;
- plans for securing property and/or access agreements and satisfying permit requirements;
- a description of tasks to be performed and work products that will be submitted, including a detailed outline of the Project Completion Report;
- provisions for weekly reporting to EPA by fax or email during implementation of field activities;
- a schedule for each task and deliverable, including all field work and submittal of a draft Project Completion Report;
- the estimated cost of implementing the Work.

Sampling and Analysis Plan

Within 45 days of EPA approval of the RI work plan, Respondents shall submit to EPA a sampling and analysis plan (SAP). The SAP shall consist of a field sampling plan (FSP) and a quality assurance project plan (QAPP), as described in EPA guidance documents, including, without limitation, “EPA Guidance for Quality Assurance Project Plans (QA/G-5)” (EPA/600/R-98/018, February 1998), and “EPA Requirements for Quality Assurance Project Plans (QA/R-5)” (epa 240/b-01/003, March 2001). If EPA disapproves or requires revisions to the SAP, in whole or in part, Respondents shall amend and submit to EPA a revised SAP which is responsive to the directions in all EPA comments. The FSP shall be written so that a field sampling team unfamiliar with the site would be able to gather the samples and field information required.

The FSP should define in detail the sampling and data-gathering methods that will be used on the project. Unless EPA agrees otherwise, it should include: descriptions of sampling objectives; sample locations and frequencies; numbers and types of samples (including QC samples); sampling equipment and equipment decontamination procedures; sampling and data collection methods; sample labeling; sample packaging and shipment; sample analysis; well construction; well development procedures; management of drill cuttings, well development water, purge water produced during sampling, and other investigation-derived wastes; field documentation requirements; and planned uses of the data.

Respondents should be prepared to demonstrate to EPA's satisfaction that each laboratory it may use is qualified to conduct the proposed work. This includes use of methods and analytical protocols for the chemicals of concern in the media of interest within detection and quantification limits consistent with both QA/QC procedures and DQOs in the approved QAPP for the site. The laboratory must have and follow an approved QA program. Respondents should only use laboratories which have a documented Quality Assurance Program which complies with ANSI/ASQC E-4 1994, “Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs,” (American National Standard, January 5, 1995) and “EPA Requirements for Quality Management Plans (QA/R-2)”

(EPA/240/B-01-002, March 2001) or equivalent documentation as determined by EPA. EPA may consider laboratories accredited under the National Environmental Laboratory Accreditation Program ("NELAP") as meeting the Quality System requirements. If the laboratory is not in the CLP program, a laboratory QA program must be submitted for EPA review and approval. EPA may require that Respondents submit detailed information to demonstrate that the laboratory is qualified to conduct the work, including information on personnel qualifications, equipment and material specifications. Respondents will provide assurances that EPA has access to laboratory personnel, equipment and records, sample collection, transportation and analysis.

The FSP shall also specify locations for monitoring well placement. The placement of the wells shall address existing data gaps, namely the southwestern (downgradient), northwestern (lateral), and southern (lateral) extent of the plume, and the concentration distribution within the western portion of the plume where contaminant concentrations were found at greater depth than near the source area. A minimum of two well locations will be required in each of these four areas. Unless an alternate approach can be justified, all monitoring wells shall be constructed as three-well clusters to delineate the vertical extent of contamination and the distribution of piezometric levels in the aquifer zones. Three-well clusters will consist of adjacent wells screened at three depths, or a single well with three separate screened intervals.

The QAPP should describe the project objectives and organization, functional activities, data quality objectives (DQOs), and quality assurance and quality control (QA/QC) protocols that will be used to achieve the desired DQOs. The DQOs shall, at a minimum, reflect use of analytical methods for obtaining data of sufficient quality to meet National Contingency Plan requirements as identified at 40 CFR 300 et. seq. In addition, the QAPP should address sample custody, analytical procedures, data reduction, data validation procedures to ensure that reported data are accurate and defensible, personnel qualifications, data management, procedures that will be used to enter, store, correct, manipulate, and analyze data; protocols for transferring data to EPA in electronic format; document control procedures, and preservation of records (in accordance with the Order).

Health and Safety Plan

Within 45 days of EPA's approval of the RI work plan, Respondents shall prepare and submit a Health and Safety Plan in conformance with the Respondents' health and safety program, and in compliance with OSHA regulations and protocols. The Health and Safety Plan should address or provide employee training, a health and safety risk analysis, a description of monitoring and personnel protective equipment, medical monitoring, standard operating procedures, contingency plans, and site control. The Health and Safety Plan is not subject to EPA approval; however, EPA will review the Plan to ensure that all necessary elements are included, and that the Plan provides for the protection of human health and the environment.

Community Relations

EPA will prepare a community relations plan, in accordance with EPA guidance and the NCP. Respondents shall provide information supporting EPA's community relations programs as

needed and requested by EPA.

3.3 Task 3: Groundwater Monitoring Well Installation

Within 90 days of EPA's approval of the SAP, the Respondents shall install, and sample groundwater monitoring wells as described in the SAP.

All wells shall be constructed in conformance with California Well Standards (Department of Water Resources Bulletin 74-90, 1991) and with requirements of permitting agencies. All wells shall be constructed with minimum four-inch diameter casing and screen, using appropriately graded filter pack and a minimum three-foot seal. The annular space to the surface should be filled with neat cement and five percent bentonite grout or similar material. All wells shall be developed by a combination of surging, bailing, and pumping. General water quality parameters including pH, temperature, specific conductance, and turbidity shall be monitored during pumping. Development should continue until at least ten casing volumes of water have been removed, water quality parameters are stable, and turbidity approaches 5 NTU. The monitoring wells should be equipped with dedicated (preferably stainless steel) bladder pumps to allow for low-flow sampling. Surface completions shall include flush-mount, traffic-rated well vaults set in concrete. Locks shall be installed on each well to prevent unauthorized access.

All required permits for installation of wells shall be obtained and copies of each permit sent to EPA within one week of issuance. Any difficulty or delays in obtaining permits shall be reported to EPA as soon as possible. Wells within City of Whittier and County of Los Angeles rights-of-way (ROW) may be placed in the street. Wells within City of Santa Fe Springs ROW must be placed in parkway areas. Excavation/encroachment permits from the municipal and County entities must be obtained, as required, in addition to well permits from the County of Los Angeles Department of Environmental Health. In addition, copies of City and County inspections and approvals of work shall be sent to EPA within one week of issuance. The Respondents shall verify and follow all applicable permitting requirements.

Field reports shall be submitted to EPA on a weekly basis. All reports must be signed by the field manager responsible for field oversight of construction. The reports shall document all activities completed and correlate progress to date with the required construction schedule. The report shall also identify significant problems encountered during the construction work and clearly describe changes made to the design made in the field. All change orders which impact the approved design (including equipment, materials, configuration) shall be reported to EPA even if the cost and schedule are not impacted. The Respondent may submit daily field reports in lieu of summarizing weekly field activities; however, a written narrative summarizing the additional, required information must be included in the report (i.e., progress, change orders, problems arising in the field, etc.).

The final approved monitoring well construction drawings shall be updated to reflect all changes

made during construction regardless of whether or not the changes were made with formal change order documents or were no-cost or no-time substitutions. The Respondents may either update the final approved design with all changes made during construction or may clearly modify the final approved documents to indicate changes made in the field by adding the applicable detail drawings, layout diagrams, etc. In addition, the submittal shall clearly describe all equipment and/or material changes or substitutions that were made during construction. A “redline” or “mark-up” set made in the field will not be accepted as a satisfactory submittal. The submittal shall be re-stamped by a licensed/registered professional (e.g., Professional Engineer or California Registered Geologist). All modifications to the approved design shall be submitted to EPA within 30 days of completing construction.

3.4 Task 4: Aquifer Testing

Within 120 days of EPA’s approval of the work plan, the Respondents shall prepare an aquifer testing plan (ATP) to ensure that the aquifer testing is conducted in accordance with EPA guidance, technically acceptable protocols, and the Data Quality Objectives. The ATP will define in detail the test objectives, procedures, locations, and equipment; sampling and analytical procedures as previously described in the SAP; and water treatment and/or disposal methods. The ATP will be written such that an experienced team unfamiliar with the site would be able to gather information to conduct the aquifer tests and collect the appropriate field data and information required. The test protocol shall be such that the collected data can be analyzed using established aquifer test analysis methods in accordance with EPA guidance. The ATP must be approved by EPA before aquifer testing begins. Respondents shall conduct aquifer pump tests within 30 days of EPA’s approval of the ATP. The results of aquifer testing, including all data and a description of field activities, shall be submitted to EPA within 30 days of completion of field work.

Within 30 days of EPA’s approval of the ATP, the Respondents will conduct a series of aquifer tests to determine the hydraulic properties of the principal contaminated water-bearing hydrogeologic units. The purpose of aquifer testing is to define the hydraulic properties of the principal water-bearing zone(s) and; evaluate the aquifer yield potential within the contaminated zone. The aquifer testing will consist of pumping tests at Santa Fe Springs Well Number One and at a new extraction well, and slug testing of all new and existing wells.

Santa Fe Springs Well Number One

The Respondents shall conduct a pumping test at Santa Fe Springs Well Number One (SFS-1) to determine the hydraulic properties of the principal hydrogeologic units and their continuity. The test will also identify potential contaminant transport pathways toward the well.

The test will be conducted as constant-flowrate and its duration will be at least 72 hours. Water levels in the pumping well and selected monitoring wells and barometric pressure will be monitored using pressure transducers attached to data loggers. The effects of pumping SFS-1 are expected to be measurable at relatively great distances from the well. The Respondents shall select existing monitoring wells as observation points to assure complete coverage of the zone

affected by the pumping. Water levels and barometric pressure shall be monitored for at least 72 hours prior to the test, during the test, and for at least 72 hours after completion of the test. The discharge rate will also be monitored and recorded continuously during the pump test. It is anticipated that the extracted groundwater will be used in the water distribution system and that there will be no treatment and discharge requirement. The Respondents shall collect, or arrange for collection of a sample of the extracted water; the sample shall be analyzed for constituents specified in Task 5 of this scope of work. The Respondents shall coordinate the test procedures (such as access, and starting and stopping the well pump) with the owners/operators of SFS-1. The Respondents shall gather production data from the well owners/operators and determine the appropriate flowrate for the test. It is desirable to discontinue the well production prior to the test and allow the head in the aquifer(s) to reach equilibrium. If this is not feasible, an alternate test protocol shall be considered. The alternate test protocol may include, for example, imposing a step-change in the production rate for 72 hours. The test protocol shall be subject to EPA approval.

New Extraction Well

The Respondents shall install a new extraction well in the vicinity of the MW08 well cluster and conduct an aquifer pumping test at the new extraction well. The test will consist of an initial step drawdown test to determine optimal pumping rate for the full pumping test, and a 72-hour constant flowrate test to define the hydraulic properties of the aquifer.

The new extraction well will be constructed with 6-inch casing and screen and screened between 65 and 85 feet bgs to approximate the second saturated sand interval screened in MW08B, MW08C, and MW08D. The Respondents shall select existing monitoring wells as observation points to assure a complete coverage of the zone affected by the pumping. Water levels in the pumping and observation wells and barometric pressure will be monitored using pressure transducers attached to data loggers. Water levels and barometric pressure shall be monitored for at least 72 hours prior to the tests, during the tests, and for at least 72 hours after the completion of the tests. The discharge rate will also be monitored and recorded continuously during the pumping tests. Water from the pumping tests will be treated by carbon adsorption and/or other applicable water treatment technologies and disposed as required by law.

Short-term constant-rate pumping tests shall be conducted at a minimum of one new well cluster in the vicinity of the leading edge of the plume. The tests shall be conducted consecutively on all (anticipated three) wells within the cluster. The test duration of approximately four hours of pumping shall be followed by complete recovery to pre-pumping heads. The tests may be conducted in a step-wise fashion if necessary. Water levels in all wells of the cluster, as well as barometric pressure, shall be monitored using pressure transducers and a data logger. Flowrate shall be measured at least every 15 minutes. Water levels and barometric pressure shall be monitored for 72 hours prior to the test and for at least 24 hours after the test.

Slug Tests

Slug tests shall be conducted on all existing EPA wells, OPOG wells, and wells installed through

implementation of this SOW to evaluate the distribution of hydraulic conductivity in the water-bearing zones. Slug testing will be conducted by measuring the recovery of head in a well after a near-instantaneous change in head at that well. The initial change in water level can be induced either by an introduction of a solid object (e.g., solid slug rod) and/or by air-pressurizing the well casing. A minimum of two tests shall be conducted at each well (if solid slug is used, both slug-in and slug-out tests shall be conducted); if the test well response extremely slow, one test may be conducted. Multiple tests using different initial displacement shall be conducted at rapidly responding wells. The head change shall be recorded continuously using a pressure transducer attached to a data logger.

3.5 Task 5: Quarterly Monitoring

EPA groundwater monitoring wells shall be sampled on a quarterly basis (February, May, August, and November) until EPA issues written notice to Respondents to discontinue sampling events. EPA wells are designated "MW" followed by a number in Attachment 2 of this SOW. EPA shall be notified at least 30 days in advance of each sampling event. The existing EPA wells are equipped with dedicated bladder pumps that allow sampling using low-flow techniques. Each well shall be purged at approximately 0.1 gallons per minute (gpm) for at least 30 minutes, and the purge water shall be monitored for pH, temperature, specific conductance, dissolved oxygen, and oxidation-reduction potential using a flow-through cell at approximately three-minute intervals. The groundwater samples shall be collected after three consecutive readings show variation of the monitored parameters of less than 5%. The new groundwater monitoring wells installed under this order shall be sampled during the same quarterly events.

The Omega Chemical Company Superfund Site Organized PRP Group (OPOG) monitors ten wells on a semi-annual basis (February and August). OPOG wells are designated "OW" followed by a number in Attachment 2 of this SOW. The Respondents shall be responsible for sampling and analysis of the OPOG wells on the alternate quarters (May and November) during the quarterly sampling events required under this order. Each sampling event shall also include collection of water level data from all OPOG and EPA wells within one 12-hour period, before sampling occurs; during the February and August events, this will require coordination with OPOG. The OPOG wells must be purged of three casing and gravel pack volumes before collecting samples, using a submersible pump. During each purge, water quality parameters shall be monitored including pH, temperature, specific conductance, and turbidity. All purge water shall be containerized and disposed at an offsite facility as required by law. All maintenance and repair/replacement of monitoring wells and ancillary equipment during the sampling events shall be the responsibility of the Respondents.

All groundwater samples shall be analyzed, at a minimum, for VOCs by EPA/SW836 Method 8260B; for perchlorate by EPA Method 314; for dissolved metals by EPA Method 200.7, 200.8, and SOP 507; for hexavalent chromium by EPA Method 218.6; for cyanide by EPA Method 335.2; for NDMA by EPA Method 1625M; and for parameters (such as nitrogen, sulfates, total organic carbon) used to assess natural attenuation of the contaminants. Practical Quantitation Limits should be no higher than the lowest of the following: EPA Maximum Contaminant Level

(EPA-MCL), California Maximum Contaminant Level (CA-MCL), California Action Level (AL). If there is no EPA-MCL, CA-MCL, or AL available for an analyte, the Practical Quantitation Limit for the analyte should be no higher than the EPA Preliminary Remediation Goal (PRG) for the Tap Water exposure pathway. PRGs are available on the EPA Region 9 website at: <http://www.epa.gov/region09/waste/sfund/prg/files/02table.pdf>

Sampling reports, including a description of field activities and all data, shall be submitted to EPA within 30 days of the sampling event.

3.6 Task 6: Project Completion Report

The respondents shall prepare a final report that presents all data and establishes site characteristics such as extent of contamination and the physical boundaries of contamination. At a minimum, elements of the completion report shall include the following:

- **Introduction.** Purpose of the report, site background, and report organization.
- **Study Area Investigation.** Summary of field activities, including previous technical memoranda/weekly reports.
- **Physical Characteristics of the Study Area.** Based on the results of field activities, discuss surface features, geology, soils, and hydrogeology of the study area.
- **Nature and Extent of Contamination.** Results of groundwater monitoring data, including contaminants of concern, vertical and lateral extent of contamination.
- **Contaminant Fate and Transport.** Potential routes of migration, contaminant persistence, and contaminant migration.
- **Summary and Conclusions.** Summarize nature and extent of contamination, and contaminant fate and transport. Discuss any limitations regarding use of the data.

Within 30 days of completing aquifer testing field activities and before beginning the project completion report, the respondents shall provide a detailed report outline for EPA review and approval. The draft report shall be submitted to EPA within 45 days of EPA's approval of the outline.

Attachment 1

EPA Guidance Documents

The Respondents shall perform all activities in accordance with EPA guidance, including but not limited to the following:

- CERCLA Compliance with Other Laws Manual, Two Volumes, U.S. EPA, Office of Emergency and Remedial Response, August 1988 (DRAFT), OSWER Directive No. 9234.1-01 and -02.
- Community Relations in Superfund — A Handbook, U.S. EPA, Office of Emergency and Remedial Response, June 1988, OSWER Directive No. 9230.0-3B.
- Data Quality Objectives for Remedial Response Activities, U.S. EPA, Office of Emergency and Remedial Response and Office of Waste Programs Enforcement, EPA/540/G-87/003, March 1987, OSWER Directive No. 9335.0-7B.
- Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA, Interim Final, U.S. EPA, Office of Emergency and Remedial Response, October 1988, OSWER Directive NO. 9355.3-01.
- National Oil and Hazardous Substances Pollution Contingency Plan; Final Rule, Federal Register 40 CFR Part 300, March 8, 1990.
- Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities, National Institute of Occupational Safety and Health/Occupational Health and Safety Administration/United States Coast Guard/Environmental Protection Agency, October 1985.
- A Compendium of Superfund Field Operations Methods, Two Volumes, U.S. EPA, Office of Emergency and Remedial Response, EPA/540/P-87/001a, August 1987, OSWER Directive No. 9355.0-14.
- Guide to Management of Investigation-Derived Wastes, U.S. EPA, Office of Solid Waste and Emergency Response, Publication 9345.3-03FS, January 1992.
- Permits and Permit Equivalency Processes for CERCLA On-Site Response Actions, February 19, 1992, OSWER Directive 9355.7-03.

Attachment 2

Existing Groundwater Monitoring Well Locations and Construction Summary

Table 1
Monitoring Well Construction Summary
Omega Chemical Superfund Site

Well ID	X	Y	Top of Casing Elevation	Ground Surface Elevation	Screen Depth Interval	Screen Elevation Interval
MW01A	402750.02	3759022.69	158	158.21	45-60	113.21-98.21
MW01B	402750.10	3759020.18	158	158.09	75-85	83.09-73.09
MW02A	402799.66	3758870.04	154	154.74	45-60	109.74-94.74
MW03A	402931.72	3758376.34	152	151.99	38-48	113.99-103.99
MW04A	402537.29	3758402.99	147	147.20	43-53	104.2-94.2
MW04B	402539.80	3758404.76	147	147.23	70-80	77.23-67.23
MW04C	402539.87	3758404.72	147	147.10	89-99	58.1-48.1
MW05A	402519.87	3758707.82	151	151.57	43-53	108.57-98.57
MW06A	402213.99	3758823.41	150	150.63	37-47	113.63-103.63
MW07A	402772.28	3757890.93	143	143.65	36-46	107.65-97.65
MW08A	402025.01	3758460.81	150	150.25	30-45	120.25-105.25
MW08B	402028.61	3758457.80	150	150.11	65-75	85.11-75.11
MW08C	402028.47	3758457.83	150	150.14	87-92	63.14-58.14
MW08D	402021.50	3758462.12	150	150.02	110-120	40.02-30.02
MW09A	401709.74	3758510.30	149	149.37	25-35	124.37-114.37
MW09B	401712.07	3758510.01	149	149.34	50-60	99.34-89.34
MW10A	402019.65	3757645.57	147	147.71	52-62	95.71-85.71
MW11A	402266.04	3757445.22	151	151.20	40-50	111.2-101.2
OW-1A	403554.40	3759242.10	207	210.30	63-78	147.3-132.3
OW-1B	403543.40	3759236.30	205	204.98	110-120	94.98-84.98
OW-2	403461.20	3759246.60	201	200.10	60-80	140.1-120.1
OW-3	403503.40	3759170.10	196	196.33	63-83	133.33-113.33
OW-4A	403320.60	3759071.90	182	182.47	50-70	132.47-112.47
OW-4B	403317.60	3759071.90	182	182.22	112-122	70.22-60.22
OW-5	402744.60	3758929.80	152	151.96	30-50	121.96-101.96
OW-6	403207.70	3758942.30	170	170.54	38-58	132.54-112.54
OW-7	403600.40	3759301.60	213	212.01	71-91	141.01-121.01
OW-8	403482.20	3759209.00	199	198.42	60-80	138.42-118.42

Explanation:

x, y coordinates - NAD 83, UTM Zone 11, meters

elevations (z-coordinate) - NGVD 88 (2000 adjusted), feet